

Spot Safety Project Evaluation

Project Log # 200704319

Spot Safety Project # 11-00-211

**Spot Safety Project Evaluation of the Flasher Installation on existing sign
Actuated by Jonesville Fire Department on US 21 Business
Yadkin County, City of Jonesville**

Documents Prepared By:

Safety Evaluation Group
Traffic Safety Systems Management Section
Traffic Engineering and Safety Systems Branch
North Carolina Department of Transportation

Principal Investigator

Jason B. Schronce

10-29-2007
Date

Traffic Safety Project Engineer

Spot Safety Project Evaluation Documentation

Subject Location

Evaluation of Spot Safety Project Number 11-00-211 – US 21 Business (Bridge Street) south of the Jonesville Fire Dept near the intersection of US 21 Business and SR 1310 (Main Street) in the City of Jonesville, Yadkin County.

Project Information and Background from the Project File Folder

The spot safety project improvement countermeasure chosen for the subject location was the installation of a single flasher on the existing fire department warning sign located on US 21 Business south of the Jonesville Fire Department. US 21 Business is a two-lane, two-way roadway that widens to include a left turn lane for SR 1310 (Main Street) in front of the fire department entrance. The posted speed limit is 35 mph. The flasher is activated by the fire department and is only to be used when responding to an emergency call.

The original statement of problem was the potential for collisions given that the sight distance along US 21 Business from the fire department entrance is approximately 280 feet around the horizontal roadway curvature. There were no collisions in the initial crash analysis from January 1, 1997 to January 1, 2000. The final completion date for the improvement at the subject intersection was on June 17, 2002 with a total cost of \$6,500.00.

Naïve Before and After Analysis

After reviewing the spot safety project file folder, the crash data omitted from this analysis to consider for an adequate construction period was from May 1, 2002 to July 31, 2002. The before period consisted of reported crashes from September 1, 1997 through April 30, 2002 (4 years and 8 months) and the after period consisted of reported crashes from August 1, 2002 through March 31, 2007 (4 years and 8 months). The ending date for this analysis was determined by the available crash data at the time of analysis.

The treatment data consisted of all crashes on US 21 Business from MP 3.288 to 3.392, which is 150' north of Hillcrest Street to 150' south of SR 1310 (Main Street). No crashes were reported within these limits in either the before or after period.

The before period ADT year was 1999 and the after period ADT year was 2004. The ADT increased from 4700 to 4800 from the before to the after period.

Discussion

During the Field Investigation, it was observed that the sign and flasher are currently blocked by limbs and brush overgrowth. The Safety Evaluation Group recommends this to be cleared so the countermeasure can be further used as intended. Please see the *Site Photos* for more explanation.

The flasher's effectiveness can not be measured in this study given that the accident history revealed no crashes at this location.

A map of Jonesville, Mississippi, showing its location relative to the Mississippi River and surrounding roads. The map includes labels for Jonesville, its population (2,256), and nearby roads (Main, Elm St, Rd. 1, Bypass, 42, 66, 67, 1310, 1386, 1403). It also identifies several churches (First Baptist Of Jonesville, Jonesville Methodist, Temple Church, Pentecostal Holiness, of God, Mineral Springs Baptist, Mt. Pleasant Church & Cemetery) and a cemetery. A red circle marks the intersection of Main and Rd. 1. The map is oriented with North at the top.

Treatment Location: US 21 Business (Bridge Street) at Jonesville Fire Department

TREATMENT SITE PHOTOS TAKEN 10/17/2007



Traveling North on US 21 Business – Flasher Covered by limbs



Traveling North on US 21 Bus. – Flasher on Fire Dept. Sign



Traveling South on US 21 Business – Fire Dept. entrance on left



Traveling South on US 21 Business in Jonesville



Traveling South on US 21 Business – backside of sign and flasher



Fire Department Flasher
blocked by limbs and brush
overgrowth

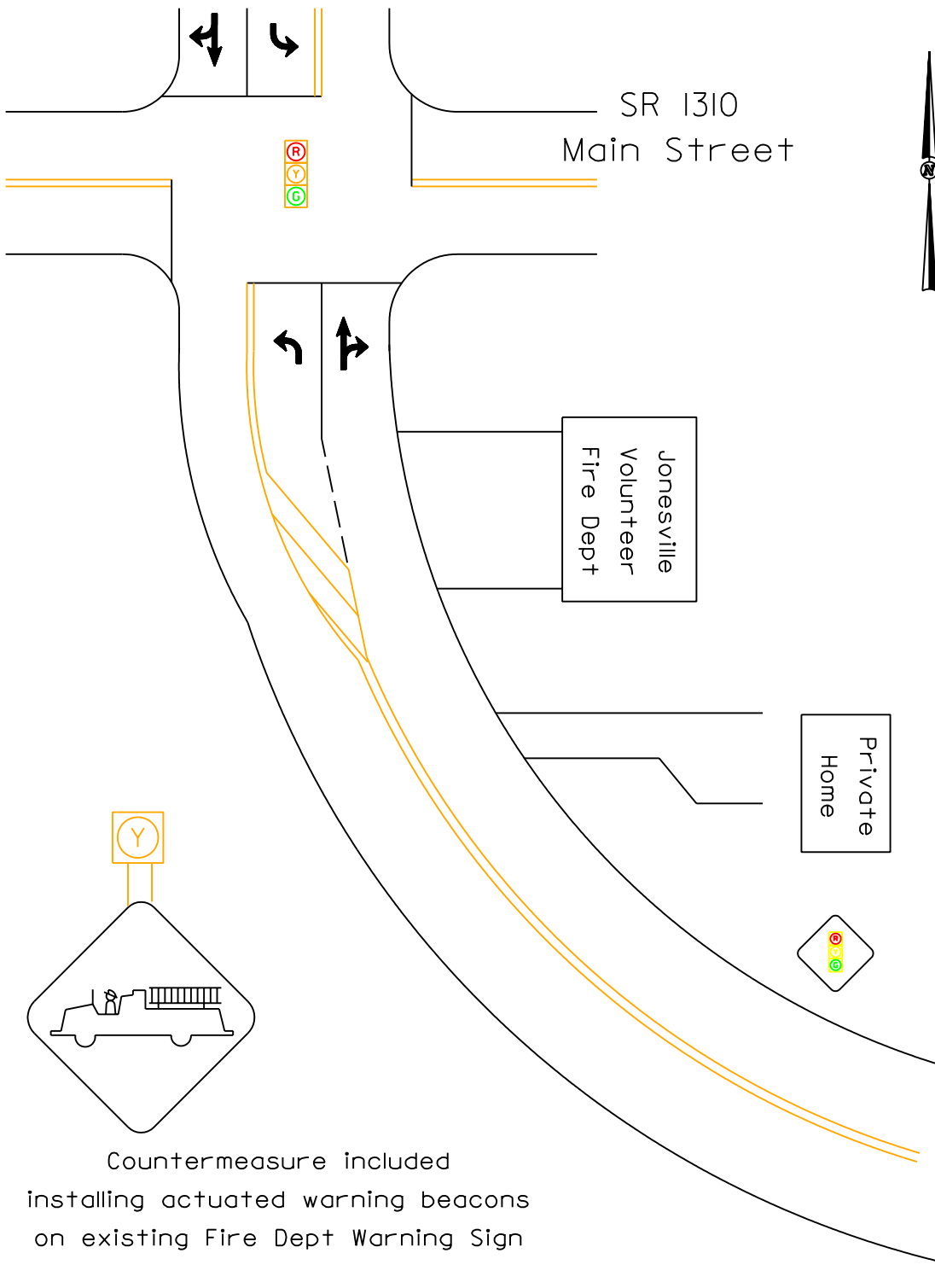
Traveling North on US 21 Business – sign and flasher blocked by overgrowth



Traveling North on US 21 Business



Traveling North on US 21 Business – Fire Dept is concrete driveway



SS# 11-00-211
Yadkin County
City of Jonesville
Fire Dept on US 21 Bus.

Note: No Crashes Reported
in Before or After Period
Before Period: 9/1/97 - 4/30/02
After Period: 8/1/02 - 3/31/07

LEGEND

MOVING VEHICLE	ANGLE	9 MPH OR LESS	P PEDESTRIAN
PEDESTRIAN	TURNING	10 MPH TO 19	T TRAIN
PARKED VEHICLE	BACKING	20 MPH TO 29	* DRIVER AT FAULT
PARKING VEHICLE	DISSIMPLE	30 MPH TO 39	D DRY
FIXED OBJECT	OUT OF CONTROL	40 MPH TO 49	W WET
HEAD ON	INJURY	50 MPH TO 59	I ICE OR SNOW
REAR END	FATALITY	60 MPH TO 69	O OLY
RAN OFF ROAD		70 AND UP	
		SPEED UNKNOWN	

TRAFFIC SAFETY SYSTEMS MANAGEMENT UNIT

COLLISION DIAGRAM	
DIVISION:	AREA:
STUDY PERIOD: See Above	
DISTANCE: Y-LINE : OFT Mainline	
ANALYSIS PREPARED BY: TF	
ANALYSIS CHECKED BY: JBS	
DIAGRAM PREPARED BY: JBS	
DIAGRAM REVIEWED BY: ST	
SCALE: NOT TO SCALE	
DATE: 10-10-2007	
LOG NUMBER: SS# 11-00-211	
N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH	